

KARASEV, N.A.; BOGOSLOVSKIY, I.D.; KOSTOGONOV, V.G.; LARKIN, F.R.; MOROZOV,  
V.I.; SERGIYEVSKIY, A.Ya.

Effect of shot peening on the properties of a nitrogen case-  
hardened layer. Metalloved. 1 term.obr.met. no.10:12-16 0  
'65. (MIRA 18:11)

1. Moskovskiy institut radioelektroniki.

GRUZIN, P.L., kand.fiz.-mat.nauk; KOSTOGONOV, V.G.; PLATONOV, P.A.

Using an artificial  $C^{14}$  isotope in studying the diffusion of carbon  
in steel. Probl. metalloved. i fiz. met. no.4:517-523 '55.  
(Carbon--Isotopes) (Steel--Analysis) (MIRA 11:4)

~~KOSTOGONOV~~ KOSTOGONOV, V. G.

USSR/ Physics - Diffusion

Card 1/2                      Pub. 22 - 10/47

Authors                      :    Gruzin, P. L.; Kostogonov, V. G.; and Platonov, P. A.

Title                        :    Application of the carbon isotope  $C^{14}$  for the study of carbon diffusion  
                                 in steel

Periodical                  :    Dok. AN SSSR, 100/6, 1069-1072, Feb 21, 1955

Abstract                    :    The development of a method for measuring the diffusion coefficient in  
                                 metals by means of the radioactive  $C^{14}$  isotope is reported. The new  
                                 method has shown greater sensitivity than all other available methods  
                                 and requires no special assumptions regarding the mechanism of diffusion  
                                 or knowledge of the structural diagram.

Institution                :    Central Scientific Research Institute of Ferrous Metallurgy, Institute  
                                 of Metallurgy and Physics of Metals

Presented by               :    Academician G. V. Kurdyumov, June 22, 1954

Periodical : Dok. AN SSSR. 100/6, 1069-1072, Feb 21, 1955

Card 2/2 Pub. 22 - 10/47

Abstract : The method was found highly suitable for the study of the effect of alloying elements on the carbon diffusion in ferrite and austenite. Some practical experiments carried out by means of the radioactive isotope method are described. Nine references: 4 USA and 5 USSR (1937-1953). Graphs.

KOSTOGONOV, V.G.

Determining small contents of austenite or alpha-phase on a  
URS-50I diffractometer. Sbor. trud. TSNIICM no.32:134-137  
'63. (MIRA 16:12)

L 27765-65 EPF(n)-2/EPR/EPA(s)-2/EWT(m)/EPA(bb)-2/EWP(b)/T/EAP(e)/  
EWP(t) Pa-4/Pt-10/Pu-4 IJP(c) NW/JG/JD

ACCESSION NR: AT5003400

S/2776/64/000/038/0051/0065

AUTHOR: Chernyak, G. S.; Smirnova, A. V.; Kostogonov, V. G.; Kokorin, G. A.;  
Romashov, V. M.; Grishina, N. S.; Dubrovina, A. N.; Pegova, T. G.

63  
57  
B+1

TITLE: Effect of titanium, aluminum, carbon and boron on the structure and phase  
composition of Ni base alloys 27 27 27

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metal-  
lurgii. Sbornik trudov, no. 38, 1964. Novyye metody ispytaniy metallov; metal-  
lograficheskiye issledovaniya i mekhanicheskiye ispytaniya metallov (New methods  
in the analyses of metals; metallographic investigations and mechanical analyses  
of metals), 51-65

TOPIC TAGS: eutectic, carbide, alloy structure, alloy phase composition, nickel  
base alloy, titanium alloy, aluminum alloy, boron alloy, carbon content

ABSTRACT: Ni-alloy specimens with different contents of C, Ti, Al and B were in-  
vestigated with respect to structure and phase composition. The excess phases  
were studied by metallographic methods including film etching, microdiffraction,  
electron microscopy and X-rays, as well as by phase analysis of the precipitated  
residues. An increased addition of Al up to 8% in specimens with 1.5% Ti, 0.02%

Card 1/2

L 27765-65  
ACCESSION NR: AT5003400

6  
C and 0.02% B led to an increase in the parameters of  $\gamma$  - and  $\gamma'$ -phase lattices and to an intensive growth of  $\gamma'$ -phase particles which were distributed on certain crystallographic planes after hardening and prolonged aging. At the same time, a second solid solution based on an NiAl compound had formed. The same pattern was observed in cast, and hardened and aged specimens containing 5% Ti. An addition of 0.02% C to specimens with 3% Ti brought about the formation of considerable amounts of differently shaped primary carbides such as  $Me_{23}C_6$ ,  $Me_6C$  and cubic  $TiC$ . In specimens without Ti, coagulation of the  $\gamma'$ -phase particles was inhibited and a carbide eutectic phase formed. With up to 0.4% B, 0.20% C, 1.5% Ti and 4.2% Al the character of the primary carbides was greatly affected, but the size of the  $\gamma'$ -phase particles remained unchanged; in these amounts, B additions enhanced the formation of a eutectic phase which lowered the alloy-ability of the solid solution and of the  $\gamma'$ -phase. "G. M. Romashova, N. F. Poplavskaya, V. N. Makarova, Z. I. Galkina and M. I. Vlaskina also took part in the work. Orig. art. has 16 figures and 1 table.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernov metallurgii, Moscow (Central ferrous metallurgy scientific research institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 005

OTHER: 000

Card 2/2

KACHANOV, Nikolay Nikolayevich; MIRKIN, Lev Iosifovich; KOSTOGONOV, V.G.,  
insh., retsenzent; LYUTTSAN, V.S., kand. tekhn.nauk, red.;  
RZHAVINSKIY, V.V., insh., red.isd-va; UVAROVA, A.F., tekhn.red.

[X-ray study of polycrystalline structures; a practical guide]  
Rentgenostrukturnyi analiz (polikristallov); prakticheskoe  
rukovodstvo. Moskva, Gos.nauchno-tekhn.isd-vo mashinostroit.  
lit-ry, 1960. 215 p. (MIRA 13:5)  
(Metallography) (X rays--Diffraction)



AKUTIN, G.K. [Akutin, H.K.]; GAYVENKO, Yu.O. [Haievenko, IU.O.];  
 DYACHENKO, M.Ya.; ZHAROV, M.T.; IVANOV, S.K.; KARNYUSHIN,  
 I.B.; KLODNITSKIY, I.I. [Klodnyts'kyi, I.I.]; KOBUS, Yu.Y.  
 [Kobus, IU.I.]; KOZLYU, V.Y. [Kosliuk, V.I.]; KORYTNIKOV,  
 V.P.; KOROBKO, M.I.; KOSTOGRIZOV, Y.S. [Kostehryzov, V.S.];  
 LADIYEV, R.Ya. [Ladiiev, R.IA.]; MARTYNIK, S.F. [Martynink,  
 H.F.]; MEL'NIK, P.M.; kand.tekhn.nauk; NAVOL'NEV, S.Ya. :  
 [Navol'niev, S.IA.]; SIN'KOV, V.M.; SPINU, G.O. [Spynu, H.O.];  
 SHOYKHET, L.A.; SHUMILOV, K.A.; KORSAK, Yu.Ye. [Korsak, IU.IB.],  
 red.; LAGUTIN, I.A. [Lahutin, I.A.], tekhn.red.

[Automation in industry] Avtomatizatsiya v promyslovosti.  
 Kyiv, Derzh.vyd-vo tekhn.lit-ry URSR, 1960. 288 p. (MIRA 14:12)

(Automation) (Industrial management)

KOSTOGRYZ, N.Ya.

New data on the tectonics of the northwestern part of Fergana  
Province. Neftgaz.geol. i geofiz. no.8:6-9 '65.

(MIRA 18:8)

1. Ob'yedineniya "Fergananeftgaz".

KOSTOGRYZ, N.Ya.

Formation of the folds of the Sokh-Rishtan region; right bank of  
the river Sokh. Neftegaz. geol. i geofiz. no.8:27-29 '64.  
(MIRA 17:9)

1. Ob'yedineniye "Fergananeftgaz".

ZELINSKIY, V.M., kand. tekhn. nauk; RUKMAN, G.L., inzh.; FEL'DMAN, G.B., inzh.;  
DENISENKO, S.A., inzh.; SMOLINA, Z.K., inzh.; KOSTOGRYZ, P.L., inzh.;  
IOFFE, I.M., tekhnik

Experience in introducing remote control of pumps in ~~drainage boreholes~~  
at the S.M.Kirov mine. Shakht. stroi. 9 no.10:27-28 0 '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i  
mekhanizatsii shakhtnogo stroitel'stva (for Zelinskiy, Rukman,  
Fel'dman). 2. Institut Avtomatuglerudprom zavoda "Krasnyy metal-  
list" (for Denisenko, Smolina, Kostogryz) 3. Yakovlevskoye stroitel'no-  
montazhnoye upravleniye tresta Soyuzshakhtoosusheniye (for Ioffe).

S/124/63/000/002/016/052  
D234/D308

AUTHORS: Semikin, I.D., Kostogryzov, V.A. and Tsygankov, O.L.

TITLE: A radiation thermometer

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 2, 1963, 110,  
abstract 2B750 (Sb. nauchn. tr. In-t avtomatiki Gos-  
plana USSR, no. 2, 1961, 153-164)

TEXT: A short theoretical explanation of the operation  
principles of the thermometer, a description of its design, certain  
test methods and some characteristics, are given. The thermometer  
is intended for temperatures from 600° to 1500°C; the time constant  
is of the order of 10 - 15 sec.

[Abstracter's note: Complete translation]

Card 1/1

KOSTOGRYZOV, V. S.

Kotrovskiy, M. M., Kuchminskiy, M. F. and Kostogryzov, V. S.

"Heating ovens of rolling shops with acicular-type recuperators," Trudy Stalinskogo o'b. otd-niya VNITOM, No. 1, 1949, p. 110, 16

SU: U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Statey, No. 26, 1949)

137-58-4-6678

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 52 (USSR)

AUTHORS: Kostogryzov, V.S., Zemlyanoy, N.G.

TITLE: Comparison of Various Heating Schedules for Open-hearth Furnaces (Sopostavleniye nekotorykh teplovykh rezhimov martenovskikh pechey)

PERIODICAL: Tr. Donetsk. otd. Nauchno-tekhn. o-va chernoy metallurgii, 1957, Nr 5, pp 69-75

ABSTRACT: Experience in the control of the operational heat balance of open-hearth furnaces, equipped with the automation system developed at the Magnitogorsk Metallurgical Kombinat shows that of the 4 schedules characterized by: 1) a constant calorific value of the mixed gas  $Q_{mix}$ ; 2) a constant flow,  $V_B$ , of blast furnace gas; 3) a constant flow,  $V_{mix}$ , of the mixed gas; and 4) a constant quantity of combustion products,  $V_{smoke}$ , the most profitable is the fourth. Its advantages are the following: 1) most economical use of coke gas, 2) conditions for the maintenance of a good flame are present during the entire heat, 3) the need to regulate the resistance of the flue area of the furnace is eliminated, 4) the air consumption in the course of the heat remains

Card 1/2

137-58-4-6678

### Comparison of Various Heating Schedules for Open-hearth Furnaces

constant, 5) the masonry of the understructure of the furnace is not overheated. The system developed provides good control over the heat load and pressure and automatic proportioning of fuel and air, with allowance for liberation of gas from the bath.

I. B.

1. Open hearth furnaces--Operation
2. Open hearth furnaces--Scheduling

Card 2/2



S/704/61/000/002/003/006  
D201/D302

AUTHORS: Kostogryzov, V.S., Candidate of Technical Sciences,  
Miroshnichenko, M.V., and Tsygankov, O.L, Engineers

TITLE: A new method of measuring thermal radiation fluxes

SOURCE: Ukraine. Gosudarstvennaya planovaya komissiya. Institut  
avtomatiki. Avtomatizatsiya i priborostroyeniye; sbornik  
nauchnykh trudov, no. 2, Kiev, 1961, 74-77

TEXT: The new method differs from the existing ones in that the temperature of the heat collector remains constant, so that the need for introducing corrections is avoided. The cylindrical heat collector is placed in a water-cooled container. The upper cylinder base is pointed towards the heat source to be measured, the other base is water cooled. In the process of measurement the heat flux from the upper cylinder base is passed along the cylinder to its lower base which is water-cooled and the magnitude of heat flux received is determined from the expression

Card 1/2  $q = c_{1,2} \left[ \left( \frac{T_s}{100} \right)^4 - \left( \frac{T_R}{100} \right)^4 \right] \text{ kcal/m}^2 \text{ hr, where } q - \text{heat}$

S/704/61/000/002/003/006  
D201/D302

A new method of measuring :

flux,  $c$  - the reduced radiation coefficient,  $T_s$  - the absolute source temperature,  $T_R$  - absolute temperature of collector,  $\psi_{1,2}$  - the angular coefficient of radiation exchange. It is seen that the magnitude of the heat is determined only by  $\psi_{1,2}$  and  $c$ .  $\psi_{1,2}$  is uniquely defined by the relative positions of the source and of the collector,  $c$  being determined by the degree of blackness of the receiver  $\epsilon_R$ , the degree of blackness of the source  $\epsilon_s$  and on the angle  $\psi_{1,2}$ . Hence for constant  $T_s$ ,  $T_R$ ,  $\epsilon_s$  and  $\epsilon_R$  - the heat stream is determined only by the linear dimensions determining the angle  $\psi_{1,2}$  or, with the aperture of the cooled cavity, in which the receiving cylinder is placed remaining constant, the heat stream is a function of the distance, at which the upper base of the cylinder is placed from the rim of the container. The arrangement can easily be made to operate automatically, by introducing a comparison element, a controller and an output stage for adjusting the cylinder position.

Card 2/2

35082

S/704/61/000/002/006/006  
D201/D302

24,5500

AUTHORS:

Semikin, I.D., Professor, Kostogryzov, V.S., Candidate of Technical Sciences, and Tsygankov, O.L., Engineer

TITLE:

A heat radiation calorimeter

SOURCE:

Ukraine. Gosudarstvennaya planvoya komissiya. Institut avtomatiki. Avtomatizatsiya i priborostroyeniye; sbornik nauchnykh trudov, no. 2, Kiyev, 1961, 153-164

TEXT: The authors describe a thermal radiation calorimeter based on the principle of temperature difference produced at a heat resistance by the thermal flux. The instrument consists basically of a hollow copper cylinder with a partition in its middle. The thickness of the cylinder walls and of the partition does not exceed 0.2 mm. The part of the cylinder above the partition acts as an absolutely black body and performs the function of a heat collector. The lower part of the cylinder is slotted, the slots acting as thermal resistances. The cylinder has a connection sleeve for the wiring of a thermocouple battery. The battery is made of copper-constant thermocouples, whose number is determined by the sensitivity

Card 1/3

A heat radiation calorimeter ...

S/704/61/000/002/006/006  
D201/D302

$T_{\text{cal}} = 100 \sqrt[4]{\frac{0.240U}{F_0}} \text{ } ^\circ\text{K.} \quad (17)$  where  $F_0$  - the area of the cross-section

of the collector input aperture in  $\text{m}^2$ ,  $U$  and  $I$  - the heating voltage and current of the source respectively (the radiation source was a spiral, placed inside the collector) and  $C$  - the reduced coefficient of radiation of the source-collector system. The instrument lag  $\varepsilon$  was found to be 13 sec. It was found that in a stationary state the indications of the calorimeter are independent of the intensity of cooling. There are 7 figures and 4 Soviet-bloc references.

KOSTOGRYZOV, V.S., kand.tekhn.nauk; TSYGANKOV, O.L.

Automatic gas-pressure control systems in the working area of regenerative soaking pits. Avtom. i prib. no.1:15-21 Ja-Mr '63, (MIRA 16:3)

1. Institut avtomatiki Gosplana UkrSSR.  
(Furnaces, Heating) (Electronic control)

KOSTOGRYZOV , V.S., kand. tekhn.nauk, red.; PAVLENKO, V.N., red.

[Automation of metallurgical processes] Avtomatizatsiia metallurgicheskogo proizvodstva. Kiev, Gos.izd-vo tekhn. lit-ry USSR, 1964. 211 p. (MIRA 18:3)

1. Kiev. Institut avtomatiki.

42.

KOSTOGRYZOV, V.S., kand. tekhn. nauk; DIKOV, V.A.; ZEMLYANOV, N.G.;  
KUNIN, B.Ya.; MIPOSHNICHENKO, M.V.; REMENYAK, V.P.

Method for objective control of the intensity of carbon  
dioxide emission from a tub. Avtom. i prib. no.1:9-12  
Ja-Mr '65. (MIRA 18:8)

KOSTOGRYZOV, V.S. [Kostohryzov, V.S.] (Kiyev); KRAVCHUK, Ye.M. [Kravchuk, Ye.M.] (Kiyev)

Automatic control of a process of mixing of several components.  
Avtomatyka 10 no.4:55-59 '65. (MIRA 18:10)

SOLODOVNIKOV, V.B., kand. tekhn. nauk; TYSHKO, A.I.; BUZMETSKIIY, L.A.

Effect of regulating the heat conditions of a holding furnace  
on fuel consumption and the quality of ingot heating. Met. i  
gornorud. prom. no.6:29-32 N.D '65.

(MIRA 18:12)



L 10892-67

ACC NR: AP6022436 (A) SOURCE CODE: CZ/0078/66/000/003/0013/0013 24

AUTHOR: Kostohryz, Pavel (Engineer; Ceske Budejovice); Leminger, Adolf (Ceske Budejovice)

ORG: none

TITLE: Automatic single-and-double cycle switch-on circuit. CZ Pat. No. PV 1664-64, Class 21

SOURCE: Vynalezky, no. 3, 1966, 13

TOPIC TAGS: electronic circuit, switching circuit

ABSTRACT: An Author Certificate has been issued for an automatic single-and-double-cycle electronic switch-on circuit. Its special feature is a common triode for both cycles and an ignition capacitor whose negative side is connected to the auxiliary ignition electrode of the triode via a series resistance. In the first cycle the ignition voltage of the tube is produced by the first charged capacitor which is connected, via a resistor and parallel diode to a controlled power supply, coupled with the ignition capacitor. In the second cycle the tube ignition voltage is provided by a second charged capacitor which is parallel-coupled via a resistor and parallel diode to the first capacitor and also to the ignition capacitor. The positive pole of

Card 1/2

L 10892-67

ACC NR: AP6022436 APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220013-8

the supply by which both above mentioned capacitors are charged is connected to a common neutral. All positive poles of all capacitors, the tube cathode, and the short-circuiting contact of the relay are connected to this neutral. The supply's negative pole is connected through the protective relay contact, a resistor, and the controlled power supply to the negative pole of the first capacitor, and via the contact relay and the diode to the negative pole of the second capacitor.

SUB CODE: 09/SUBM DATE: 23Mar64/

Card 2/2

ACC NR: AP6022437

(A)

SOURCE CODE: CZ/0078/66/000/003/0013/0013

INVENTOR: Kostohryz, Pavel (Ceske Budejovice; Engineer); Leminger, Adolf (Ceske Budejovice)

ORG: none

TITLE: Single-throw and double-throw automatic switch. CZ Pat. No. PV4640-65, Class 21

SOURCE: Vynalezy, no. 3, 1966, 13

TOPIC TAGS: electric switch, electric power engineering, electric equipment

ABSTRACT: A general-purpose, single-throw and double-throw automatic switch based on Czechoslovak patent No. (PV 1664-64) is proposed. The switch is distinguished by the following: the first capacitor is connected through the negative pole via a resistor having a parallel diode to the ignition-capacitor negative pole, and through the positive pole via a contact of the controlled power instrument to the ground. The second capacitor is connected in parallel via a resistor having a parallel diode and via a disconnecting contact of the relay to the circuit of the first capacitor. The second capacitor is also connected via the contact of the controlled power instrument to the ignition capacitor. The positive pole of the power supply is connected via the exterior blocking contact of the protective relay and via a resistor

Card 1/2

ACC NR: AP6022437

to the positive poles of both capacitors; it is also connected to the short-circuiting contact of the controlled power instrument and to the relay contact.

SUB CODE: 09/ SUBM DATE: 21Jul65/

Card 2/2

KOSTOKOV, V. U.

"Methods of Determination of the Equivalent Specific Conductivity of the Earth." Cand Tech Sci, Tomsk Polytechnics Inst, Tomsk, 1954.  
(RZhFiz, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR  
Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

I. 18802-66

ACC NR: AP6010928

SOURCE CODE: CZ/0049/65/000/012/0916/0919

AUTHOR: Kostolanska, Anna (Kosice); Hluchan, Eugen--Glukhan', E. (Bratislava) <sup>42</sup>  
B

ORG: [Kostolanska] Institute for Experimental Biology, Slovak Academy of Sciences, Kosice (Ustav experimentalnej biologie Slovenskej akademie vied); [Hluchan] Research Institute for Hygiene, Bratislava (Vyskumny ustav hygieny)

TITLE: Influence of stack gases from aluminum works upon the content of fluorides in the bones of frogs

SOURCE: Biologia, no. 12, 1965, 916-919

TOPIC TAGS: industrial waste, exhaust gas, fluoride, bone, experiment animal, aluminum, air pollution

ABSTRACT: The authors found a content of 51,5 - 488.4 mg of F per 100 g of dry bones from frogs living in the neighborhood of the aluminum works. This compares with an average value of 45.3 mg found in frogs living outside of the area. Orig. art. has: 1 figure and 1 table. [JPRS]

SUB CODE: 06, 13 / SUBM DATE: 31May65 / ORIG REF: 005

Card 1/1 - mgs

41734

27.12.20

Z/049/62/000/008/001/001  
E112/E135

AUTHOR: Kostolanská, Anna

TITLE: Effects of low temperatures on post-radiation changes  
in eggs of *Bombyx mori* L.

PERIODICAL: *Biológia*, no.8, 1962, 626-628

TEXT: 2400 eggs of *Bombyx mori* L. were divided into three groups: (I) stored in refrigerator for 4 months at +5 °C served as control; (II) was irradiated with 4000 r and afterwards stored in refrigerator under the same conditions as (I); (III) was irradiated with 4000 r after being stored for 4 months at +5 °C. The changes through irradiation were determined by measuring the O<sub>2</sub> uptake with Warburg's respirometer. Conclusions: Irradiation reduces generally the O<sub>2</sub> uptake. A period of cooling after irradiation weakens its effect (the oxygen uptake of group (II) was only slightly lower than that of (I)).

There is 1 figure.

Card 1/2

Effects of low temperatures on ...

Z/049/62/000/008/001/001  
E112/E135

ASSOCIATION: ČSAV - Biologický ústav Slovenskej akadémie vied,  
Oddelenie zoológie a Katedra zoológie  
Prírodovedeckej fakulty Univerzity Komenského  
v Bratislave  
(ČSAV - Institute of Biology, Department of Zoology  
and Chair of Zoology of the Natural Sciences  
Faculty, Komensky University, Bratislava.)

SUBMITTED: March 19, 1962

Card 2/2

OSZCERNOWSKI

Stefan PAULOV, Gabriela GIRETCOVA and Anna KOSTOLANSKA, Department of Zoology of Faculty of Natural Sciences of Comenius University (Katedra zoologickej prirodovedeckej fakulty Univerzity Komenského), and Zoology Division, Institute of Biology of Slovak Academy of Sciences, Czechoslovak Academy of Sciences (Oddelenie zoologickej biologickej ustav Slovenskej akademie vied, Československá akademie vied) Bratislava.

'Use of Potassium Hydroxide Solutions in Determining Concentration of Paper-Chromatographically Separated Proteins.'

Bratislava, Biologia, Vol 17, No 11, 1962: pp 641-643.

Abstract [German summary modified]: Authors found a 40 mg. KOH per 100 ml. of physiological saline optimal. Diagram showing time on abscissa, log of bromine blue coloration on ordinate at various KOH concentrations.

KOSTOLANSKA, Anna

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220013-8

Effect of temperature on post-irradiation changes in Bombyx mori eggs. Biologia 17 no.8:626-628 '62.

1. CSAV — Biologický ustav Slovenskej akademie vied, Oddelenie zoologie a Katedra zoologie Prirodovedeckej fakulty Univerzity Komenského v Bratislave.

(SILKWORMS)

(RADIATION EFFECTS)

(COLD)

PAULOV, Stefan; GIRETHOVA, Gabriela; KOSTOLANSKA, Anna

Use of KOH solutions for determination of the concentration of proteins separated by paper electrophoresis. Biologia 17 no.11: 841-843 '62.

1. Katedra zoologie Prirodovedeckej fakulty Univerzity Komenskeho v Bratislave a CSAV, Biologicky ustav Slovenskej akademie vied, Oddelenie zoologie v Bratislave.

(PROTEINS)

(ELECTROPHORESIS)

(HYDROXIDES)



LIBIKOVA, H.; VILCEK, J.; technical assistance: A. Stykova, V. Kostolanska

Assay of the tick-borne encephalitis virus in HeLa cells. II. Neutralisation tests using the cytopathic and metabolic inhibition effects. Acta virol. Engl. Ed. Praha 5 no. 6: 375-384. N '61.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

(ENCEPHALITIS EPIDEMIC virol)

"APPROVED FOR RELEASE: 06/14/2000

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KOSTOLANSKY, E.; promovany matematik; STEFANEC, V., inz.

Optimum spotting of extra-high-voltage line poles on digital computers. Energetika Cz 14 no. 4: 184-187  
Ap '64.

1. Slovak Academy of Sciences Bratislava (for Kostolansky).
2. Elektrovod National Enterprise, Bratislava (for Stefanec).

KOSTOLEVSKIY, N.

Lumber Trade

Present state of thw world's timber market. Vnesh.torg. no. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

KOSTOLNY, I.

DOBROTA, S.; KOSTOLNY, I.

Experiences with bronchographic examinations. Bratisl. lek. listy  
34 no.2:123-138 F '54.

1. Z II. chirurgickej kliniky LFSU v Bratislave, prednosta clen  
korespondent SAV k. Siska.  
(BRONCHI, radiography.)

KOSTOLNY, I.

Primary polymorphocellular sarcoma of the diaphragm with chondromatous and osteosarcomatous metaplasia. Bratisl.lek.listy 35 no.8:473-480 30 Apr 55.

1. Z II. chirurgickej kliniky LFUK v Bratislave, prednosta chlen korespondent SAV Karol Siska.

(DIAPHRAGM, neoplasms,

polymorphocellular sarcoma with chondromatous & osteosarcomatous metaplasia, surg.)

*KOSTOLNY I.*  
SIMKOVIC, I.; DEBROTA, S.; KOSTOLNY, I.; SCHNORRER, M.; KRATOCHVIL, M.;  
PIVKOYA, A.; DUCHON, J.

A hemodynamic study of the pulmonary circulation in some surgical  
pulmonary diseases. Bratisl. lek. listy 35 no.10:641-646 31 May 55.

1. Z II chir. kliniky LFUK v Bratislave, prednosta olen koresp.  
SAV K. Siska, z Ustavu uzitej anatomie LFUK v Bratislave, prednosta  
MUDr. M. Kratochvil, a z II. internej kliniky LFUK v Bratislave,  
prednosta doc. MUDr. V. Haviar.

(HYPERTENSION

pulm. in surg. pulm. dis., catheterization of heart  
& pulm. artery)

(LUNGS, diseases

surg., pulm. hypertension elimination by catheterisation)

(HEART

catheterization in surg. pulm. dis.)

(ARTERIES, PULMONARY

catheterization is surg. pulm. dis.)

*Country, ...*

Country: Czechoslovakia

Academic Degree: Dr

Affiliation: Director of VJUMP (presumably Vojenský ústav pro choroby plicní; Military Hospital for Pulmonary Diseases) in Klad-Polianska.

Source: Prague, Epitely a tuberkulóza a v Peritoneu, Plicních, No 4, Apr 61, pp 262-270.

Title: "Open Hinged Tuberculous Cavities"

Co-authors:

KACIČEK, M., Dr. Chief of Pathology Department (patologicko-anatomické oddělení) of the Military Hospital (Vojenská nemocnice) in Auschberg.

KACIČEK, J., Dr. II Surgery Clinic (II. chirurgická klinika) in Bratislava. Chief: anesthesiologist K. ŠIMKA.



KOSTOLNY

SINTAJ, M. MUDr.: KOSTOLNY, I. MUDr.

Congenital pulmonary arteriovenous aneurysms.  
Cesk. pediat. 11 no.1:51-55 Feb. 56.

1. Z I. detakej kliniky UK v Bratislave, prednosta doc. MUDr I.  
Jakubcova, XII. chirurg. kliniky UK v Bratislave, prednosta prof.  
MUDr. K. Siska.

(FISTULA, ARTERIOVENOUS,  
congen. of lungs, diag. & surg.)  
(LUNGS, fistula  
arteriovenous congen. diag. & surg.)

KOSTOLNY, I.; RAKAY, A.

Resection of the lungs in silicotuberculosis. Bratisl. Lek. Listy 1  
no.3:150-157 '62.

1. Z II chir. kliniky Lek. fak. Univ. Komenského v Bratislave, pred-  
nosta akademik SAV K. Siska, a z Vojenského ústavu pre choroby pľúcne  
v Novej Polianke, riaditeľ MUDr. O. Halak.

(PNEUMONECTOMY) (SILICOSIS compl)  
(TUBERCULOSIS PULMONARY compl)

KOSTOLNY, I.

1. Thrombotic Thrombocytopenic Purpura, MD and Doctor of Sciences, D. Sci., "Buletin" pp 323-325.
2. Thrombotic Thrombocytopenic Purpura and Atypical Hemolytic Anemia, by E. KOSTOLNY, D. Sci., "Buletin" pp 323-325.
3. Thrombotic Thrombocytopenic Purpura and Atypical Hemolytic Anemia, by E. KOSTOLNY, D. Sci., "Buletin" pp 323-325.
4. Thrombotic Thrombocytopenic Purpura and Atypical Hemolytic Anemia, by E. KOSTOLNY, D. Sci., "Buletin" pp 323-325.
5. Thrombotic Thrombocytopenic Purpura and Atypical Hemolytic Anemia, by E. KOSTOLNY, D. Sci., "Buletin" pp 323-325.
6. Thrombotic Thrombocytopenic Purpura and Atypical Hemolytic Anemia, by E. KOSTOLNY, D. Sci., "Buletin" pp 323-325.
7. Thrombotic Thrombocytopenic Purpura and Atypical Hemolytic Anemia, by E. KOSTOLNY, D. Sci., "Buletin" pp 323-325.

35  
141

1. "Professor Valentin RABINOV, MD and Doctor of Sciences, is sixty," editorial; pp 321-323.
2. "Preventive Complications and After-Treatment in Patients Undergoing an Operation for Extremopoleur Clavicular," by K. SHKOL, I. GELMAN, E. VAKHOTOVA, M. SHCHERBA, T. GELMANOVA, M. RYBA and D. GORODKOVICH of the No 2 Surgery Clinic at the Institute of Communist University "YU. Zhukovskiy" (English summary)
3. "The Academy of Communist University in Leningrad," editorial; pp 323-331 (English summary)
4. "Concurrent Problems in the Diagnosis of Bone Tumors and Smaller Bone Abscesses," by J. GORODKOVICH, (preliminary and corresponding member of the SAV (Soviet Academy of Sciences) and corresponding member of the ACADEMY of the Communist Clinic (corresponding member) in the Medical Faculty of Communist University (see No 2) in Zhurnal; pp 335-343 (English summary).
5. "Chemical Composition of Plasma and Cerebral Vascular Pathoses -- Twenty Results in 35 Cases," by G. GORODKOVICH, MD, head of the Clinic of Pathology and Brain Surgery (in Zhurnal; a summary) in Zhurnal; pp 345-356 (English summary).
6. "Non-specific Infections of the Small Intestines," by E. GORODKOVICH, MD, head of the Clinic at the Medical Faculty of Communist University (see No 2) in Zhurnal; pp 356-358.
7. "On the Problem of the Immunological Implantation of Inoculum Arteries at the End of Increasing Hypocellular Blood P," by E. GORODKOVICH of the Surgery Clinic at the Medical Faculty of Communist University (Zhurnal; a summary) in Zhurnal; pp 359-369 (English summary).
8. "On the Problem of Indications to the Resection Treatment of Basaloid Adenocarcinoma of the Prostate Gland," by M. KURNOV, O. SHKOL, E. GELMANOVA, A. GORODKOVICH and M. GELMANOVA, (preliminary and corresponding member of the SAV (Soviet Academy of Sciences) and corresponding member of the ACADEMY of the Communist Clinic (corresponding member) in the Medical Faculty of Communist University (see No 2) in Zhurnal; pp 369-371 (English summary).
9. "On the Problem of the Resection Treatment of Basaloid Adenocarcinoma of the Prostate Gland," by M. KURNOV, O. SHKOL, E. GELMANOVA, A. GORODKOVICH and M. GELMANOVA, (preliminary and corresponding member of the SAV (Soviet Academy of Sciences) and corresponding member of the ACADEMY of the Communist Clinic (corresponding member) in the Medical Faculty of Communist University (see No 2) in Zhurnal; pp 371-373 (English summary).

KORHON, M.; HALAK, O.; CHALUPOVA, E.; KOSTOLNY, I.; CHALUPA, M.

On the problem of the indication of residual fibrocaseous tuberculous  
beds in the lung following resection therapy. Bratisl. lek. listy 42  
no.9:569-574 '62.

1. Z patologickoanatomickeho ustavu Palackeho University v Olomouci,  
~~prednosta doc. MUDr. V. Valach, z chirurgicke kliniky Palackeho Uni-~~  
~~versity v Olomouci, prednosta prof. MUDr. Vl. Rapant, Dr. Sc., z~~  
VUCHP v Nove Poliance, prednosta MUDr. O. Halak. a z II chir. kliniky  
lek. fak. Univ. Komenskeho v Bratislave, prednosta akad. K. Siska.

(PNEUMONECTOMY)

RAKAY, A.; KOSTOLNY, I.; KORHON, M.; HALAK, O.; CHALUPOVA, E.; CHALUPA, M.;  
SKOKNA, D.; SALZMANN, J.

Results of a study of the bronchi and peribronchial lymph nodes following  
resection of the lungs in tuberculosis. Bratisl. lek. listy 42 no.10:  
596-600 '62.

1. Z Vojenskeho ustavu pre choroby pl'ucne v Novej Polianke, riaditel'  
MUDr. O. Halak a z II. chir. kliniky Lek. fak. Univ. Komenskeho v  
Bratislave, prednosta akademiej K. Siska.  
(TUBERCULOSIS PULMONARY) (BRONCHI) (LYMPH NODES)  
(PNEUMONECTOMY)

KOSTOLNÝ, I.

8  
HAL'ÁK, O., MD; KOSTOLNÝ, I.; SKOKŇA, D; SALZMANN, J;  
RÁKAY, A; CHALUPOVÁ, E; CHALÚPA, M; KORHON, M., MD.

Czechoslovakia

VUCHP -- Nova Polianka (VUCHP -- novi Polianka);  
Head: O. HAL'ÁK, MD; Second Surgical Clinic  
-- Bratislava (II. chirurgická klinika -- Bratislava); Head: K. ŠÍŠKA; Pathological-Anatomical  
Ward of the Military Hospital -- Ružomberk  
(Patologickoanatomický oddelenie Vojenskej  
nemocnice -- Ružomberk); Head: M. KORHON, MD.  
- (for all)

Bratislava, Lekársky Obzor, No 1, 1963, pp 41-49

"The Selection and Indications for and Results of  
the First One Hundred Lung Resections for Tuberculosis  
Performed at VUCHP NOVA POLIANKA."

DORNETZHUBER, V.; SVITOK, I.; KOSTOLNY, I.; MISEK, P.; MATUSKOVA, E.

Pathomorphological picture of resected lung with tuberculosis changes. Bratisl. lek. listy 44 no.2:91-101 31 J1 '64.

1. Ustav tuberkulozy v Bratislave (riaditel MUDr. J. Markovic)  
II chirurgicka klinika Lek. fak. Univerzity Komenskeho v Bratislave (veduci akad. prof. MUDr. K. Siska).



PIVKOVA, A.; KOSTOLNY, I.

Experiences with the resection treatment of carcinoma of the lungs. Bratisl. lek. listy 44 no. 4: 230-238 '64.

1. II. chirurgická klinika Lek. fak. Univ. Komenského v Bratislave;  
veduci: akad. K. Siska.

PIVKOVA, A.; KOSTOLNY, I.

Experiences with the resection treatment of carcinoma of the lungs. Bratisl. lek. listy 44 no. 4: 230-238 '64.

1. II. chirurgická klinika Lek. fak. Univ. Komenského v Bratislave;  
veduci: akad. K. Siska.

RAKAY, A.; KOSTOLNY, I.; KORHON, M.

Prognostic significance of bronchial and lymph node tuberculosis in lung resections. Bratisl. lek. listy 44 no. 4: 239-248 '64.

1. Vojensky ustav pre choroby plucne v Novej Polianke (riaditel: MUDr. O. Halak (Sc.)) ; II. chir. klinika Lek. fak. Univ. Komenského v Bratislave (veduci: akademik K. Siska) a Pat. anat. oddelenie Voj. nemocnice v Ruzomberku (veduci: MUDr. M. Korhon).

\*

CZECHOSLOVAKIA

SISKA, Karol, prof., dr., KOSTOLNY, I

Second Surgical Clinic (II. chirurg. klin.), LF UK,  
Bratislava - (for both; Siska head)

Bratislava, Lekarsky sbornik, No 5, May 1966, pp 279-284

"Sporting accidents of the chest and organs of the chest."

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000825220013

L 35380-66

SOURCE CODE: CZ/0060/66/000/002/0084/0087 29

ACC NR: AP6026852

AUTHOR: Rakay, Anton (Lieutenant colonel; Doctor of medicine); Halak, Ondrej—Galak,  
O. (Colonel; Docent; Doctor of medicine; Candidate of sciences); Kostolny, Imrich—  
Kostol'nyy, I. (Docent; Doctor of medicine)

ORG: Military Institute for Lung Diseases /headed by Colonel, Docent, Doctor of  
Medicine, Candidate of Sciences O. Halak/, Nova Polianka (Vojensky ustav pre choroby  
plucne); Second Surgical Clinic /headed by Academician, Professor, Doctor of Medicine  
K. Siska/, Bratislava (II. chirurgicka klinika)

TITLE: Lung resection in treatment of tuberculosis in active duty pilots

SOURCE: Vojenske zdravotnicke listy, no. 2, 1966, 84-87

TOPIC TAGS: aeromedicine, tuberculosis, surgery

ABSTRACT: A description of partial lung resections performed on  
7 active-duty pilots who suffered from tuberculosis is given. The  
operation is indicated in young pilots who have a single lung  
affected and in whom antimicrobial treatment was not successful.  
The resection should be radical enough, while as much lung paren-  
chyma as possible should be saved. When there are no complica-  
tions after the operation, the patient may return to active duty  
after one year. [JPRS: 36,834]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 005 / OTH REF: 007  
UDC: 616.24-002.5-08-039.713: 358.4

Card

1/1 Ldk

KOSTOLCMOV, V.

Radio - Apparatus and Supplies

Simplest disconnecting switch. Radio, 29, No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June <sup>2</sup>~~1973~~, Uncl.

KOSTOLOMOV, V.

A new system of mechanizing poultry houses in Cherkassy  
Province. Sil'.bud. 12 no.9:8-9 S '62. (MIRA 15:11)

1. Glavnyy tekhnolog Cherkasskoy oblastnoy mezhkolkhoznoy stroitel'noy  
organizatsii.  
(Cherkassy Province--Poultry houses and equipment)

GRINSHTEYN, V. Ya., inzh.; KOSTOLONOV, V. F., inzh.

Devices for finding and separating out metal at stone crushing  
plants. Stroi. mat. 8 no.9:15-17 S '62. (MIRA 15:10)

(Stone and ore breakers)

POLAND / Cultivated Plants. Medicinal Plants. M-9  
Essential Oil Plants. Poisonous Plants.

Abstr Jour: Ref Zhur-Biol., 1958, No 16, 73224.

Author : Gatty-Kostyla, Marek; Kubiak, Z.; Kostolowska, M.

Inst : Not given.

Title : Medicinal Use of Shoots of Belladonna Instead of  
the Leaves.

Orig Pub: Acta polon. pharmac., 1956, 13, No 2, 81-88.

Abstract: It is recommended to gather the tops of the belladonna shoots above the first fork, which contain a great quantity of active compounds, before flowering and during setting of the fruit. The alkaloids content in the shoots comprises 0.4-0.6% which exceeds the normal of the Polish pharmacopoeia 1.5-fold. The greatest content of alkaloids is in the raw material of the spring harvest. Comparison of

Card 1/2

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KOSTOŁOWSKI, Antoni, mgr. inż.; MALIGŁOWSKI, Bernard, inż.

The metal-processing industry of Krakow Voivodeship.  
Przegl mech 21 no.9/10:288-291. 10-25 My '62.

1. Zjednoczenie Przemysłu WYROBÓW Metalowych, Krakow.

KOSTOLOWSKI, Antoni

Application of automatic equipment and automatic lines in cold plastic working processes. Mechanik 34 no.9:461-464 '61.

1. Zjednoczenie Przemyslu Opakowan Blaszanych, Warszawa.

KOSTOLOWSKI, Julian; GRZEGORCZYK, Leslaw

Lymphangioma circumscriptum of the skin. Przegl. dermat., Warsz.  
6 no.3:233-238 May-June 56.

1. Z Oddziału dermatologicznego Szpitala Wojewódzkiego w  
Rzeszowie Ordynator: dr. J. Rzeszow, Przychodnia Skorno-  
Wenerologiczna, Gröttingera 26.

(LYMPHANGIOMA, case reports,  
skin (Pol))

(SKIN NEOPLASMS, case reports,  
lymphangioma (Pol))

KOSTOLOWSKI, Julian; GRZEGORCZYK, Leslaw

ACTH therapy of tabetic pain. Polski tygod. lek. 11 no.10:  
467-469 5 Mar 56.

1. Z oddzialu dermatologicznego Szpitala Wojewodzkiego w  
Rzeszowie. Ordynator: dr. med. Julian Kostolowski. Rzeszow,  
ul. Turkienicza 33.

(ACTH, therapy,  
tabetic pain (Pol))  
(TABES DORSALIS, therapy,  
ACTH in tabetic pain (Pol))

KOSTOŁOWSKI, Roman

Anthrotomy in infants in the light of our observations. Otolaryng. Pol. 17 no.3:273-277 '63.

1. Z I Kliniki Pediatricznej AM we Wrocławiu (kierownik: prof.dr. H.Hirszfeldowa) ; a II Kliniki Pediatricznej AM we Wrocławiu (kierownik: prof.dr.M.Wierzbowska) i z Kliniki Chirurgii Dziecięcej AM we Wrocławiu (kierownik: z-ca prof. dr.med. A.Michejda).

KOSTOŁOWSKI, Roman; DRĄKOWA, Danuta; NOWAKOWSKI, Tadeusz K.; HAJZIK, Roman

Simulated and true otitis media in measles in young children.  
Otolaryng. pol. 17 no.4:495-496 '63.

1. Z Kliniki Chorob Zakaźnych Wieków Dziecięcego AM we Wrocławiu. Kierownik: prof. dr. T.K.Nowakowski.

KOSTOŁOWSKI, Roman., Wrocław, ul. H. Sawickiej 7/5

Child laryngology. Polski tygod. lek. 12 no.14:530-532 1 Apr '57.

1. Z Oddziału Pediatrycznego A. M. we Wrocławiu; kierownik  
Kliniki: prof. dr H. Hirsfeldowa.

(OTORHINOLARYNGOLOGY

child otorhinolaryngo. (Pol))

BALGAR-BORONIOWA, Anna; KOSTOLOWSKI, R.

Otitis media in infancy from the point of view of the pediatrician and laryngologist. *Pediat. polska* 33 no.1:21-30 Jan 58.

1. Z II Kliniki Chorob Dziecięcych A.M. we Wrocławiu. Kierownik: prof. dr me. M. Wierszowska. Adres: Wrocław, ul. Curie-Skłodowskiej 50/52 II Klinika Chor. Dziec.

(OTITIS MEDIA, in inf. & child.  
diag. & surg. (Pol))



GUZY, Krystyna; KOSTOŁOWSKI, Roman

Inflammation of the mastoid cavity (antritis) as a pediatric problem.  
Otolaryngologia 15 no.3:363-366 '61.

1. I Kliniki Pediatrii AM we Wrocławiu Kierownik: prof. dr med.  
H. Hirsfeldowa.

(MASTOIDITIS in inf & child)

L 11167-66 EWT(1)/EWT(m) JD

ACC NR: AP6000366

SOURCE CODE: UR/0286/65/000/021/0061/0061

AUTHORS: Devyatov, G. K.; Levit, M. Ye.; Ivanov, V. I.; Kostomakhin, V. A.; Medzhitov, R. D.

ORG: none

TITLE: Device for contactless measurement of rotor sag. Class 42, No. 176106  
[announced by Moscow Order of Lenin Aviation Institute, im. Sergo Ordzhonikidze  
(Moskovskiy ordena Lenina aviatsionnyy institut)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 61

TOPIC TAGS: electronic circuit, detection equipment

ABSTRACT: This Author Certificate presents a device for contactless measurement of rotor sag. The device contains a capacitive unary sensor included in a resonance circuit supplied by a high frequency oscillator, a detector, and a matching stage with a meter (see Fig. 1). To simplify the measuring process and to increase the readout accuracy, a compensating capacitor is inserted in the resonance circuit in series with the sensor. The capacitor insures a linear dependence between the magnitudes of the output voltage and rotor sag.

Card 1/2

UDC: 531.717.2:621.317.39

L 11167-66

ACC NR: AP6000366

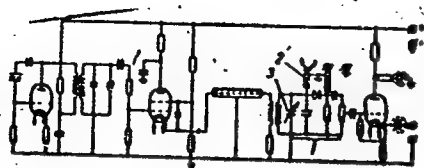


Fig. 1. 1 - Resonance circuit;  
2 - sensor; 3 - compensating  
capacitor.

Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 17Jul64

EC  
Card 2/2

KOSTOMANOV, G. M.

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,  
p 192 (USSR) 15-57-7-10039

AUTHOR: Kostomanov, G. M.

TITLE: New Data on the Stratigraphy and Structure of the  
Osinovskiy Region of the Kuzbass (Novyye dannyye po  
stratigrafii i tektonike Osinovskogo rayona Kuzbassa)

PERIODICAL: V sb: Vopr. geologii Kuzbassa. Nr 1, Moscow, Ugletekhiz-  
dat, 1956, pp 241-244

ABSTRACT: The author cites data on the stratigraphy and structure  
of the Osinovskiy field obtained during the last five  
years from extensive geological exploration and deep  
drilling. The Jurassic rocks consist of a conglomeratic  
series of variable facies. The conglomerates form two  
horizons (48 to 55 percent of the total thickness);  
the remaining part of the series consists of sand-  
stones, phyllites, and mudstones. Two layers of

Card 1/3

New Data on the Stratigraphy (Cont.)

15-57-7-10039

brown coal, 5 m to 8 m thick, are present. The coal-bearing part of the series forms 4.5 percent of the total on the south, 3.9 percent on the north. The Jurassic rocks are at least 500 m thick. Below this system lies the sand-clay sequence of the Yerunakova series, which contains up to 25 beds of coal, of which 14 to 15 are thick enough to be workable over the entire region. This series reaches a thickness of 700 m in the central part of the region. The Il'inskiy series is found in the eastern part of the region. It is similar lithologically to the Yerunakova series, but it contains no economic coal. The structure of the region is complicated and distinguished by an abundance of large and small faults of various ages. A study of these faults leads to the differentiation of several phases of folding. The most intense folding occurred in the region of the Pfalzian phase, involving pre-Jurassic rocks and divided into three subphases. In the first subphase, the rocks of the Yerunakova series were broken by reverse faults. In the second subphase the rocks were folded to such an extent

Card 2/3

New Data on the Stratigraphy (Cont.)

15-57-7-10039

that the reverse faults of the first phase now appear as over-thrusts. In the third, and final, subphase, large-scale reverse faulting occurred, but did not involve folding. These disturbances are all local, no faulting being found in the neighboring Baydayevka region. The Jurassic rocks lie on the underlying formations unconformably, but the unconformity is affected locally by later phases of tectogenesis which involved late Mesozoic sediments. The Jurassic rocks have been weakly disturbed by folding, but faults are not found in them. The article contains diagrams.

Card 3/3

I. N. Krylov

*NINA GEORGIJEVNA*  
KOOTCHANOVA, T.G., Cand Med Sci —(diss) "On the problem of <sup>variability</sup> ~~changeability~~  
of ~~the~~ position, form <sup>and dimensions</sup> ~~structures~~ of accessory <sup>nasal</sup> cavities in human <sup>(lungs)</sup>. (Anatomo-  
/roentgenological study)." Saratov, 1958. 12 pp (Min of Health RSFSR.  
Saratov State Med Inst), 200 copies(EL, 24-58, 123)  
*Ch. Normal Anatomy*

KOSIOMANOV, B.

"Fisheries and Modern Biology." p. 118, Bratislava, Vol. 6, 1951.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress



KOSTOMAROV, BORIS

Rozmnozovani a plemenitbaryb. (1. vyd.) Praha, Nakl. Ceskoslovenske akademie  
ved. (Veda, meni zivot, sv. 7) (Fish culture and breeding. 1st ed. illus., bibl.,  
indexes, tables)  
Vol. 1. 1955. 158 p.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955,  
Uncl.

Country : Czechoslovakia  
CATEGORY :

ABST. JOUR. : RZBiol., No. 1, 1959, No. 367

AUTHOR : Kostomarov, B.; Hochman, L.; Loses, B.  
: Institute of Agriculture and Forestry  
: Institute of Agriculture and Forestry  
Composite Studies of the River Irtys

ORIG. PUB. : Sbor. Vyske skoly zemed. a lesn. brne, 1957,  
A, No 1, 119-127

ABSTRACT : Results of composite studies of the river  
Irtys for hydrology, hydrochemistry, bacteriology,  
zoology, ichthyology, and diseases of fish.

CARD:

at brno.

KOSTOMAROV, D. P.

KOSTOMAROV, D.P. — "On the Asymptotic Behavior of Solutions of First-Order Linear Differential Equations in the Vicinity of an Irregular-Special Point." Moscow Order of Lenin and Order of Labor Red Banner State " imeni M. V. Lomonosov. Physics Faculty. Moscow, 1955. (Dissertation for the Degree of Candidate in Physicomathematical Sciences)

SOURCE Knizhnaya Letopis', No 6 1956

Kostomarov, D.P.

Kostomarov, D. P. On asymptotic behavior of solutions of linear differential equations of second order in the neighborhood of an irregular singular point. Dokl. Akad. Nauk SSSR (N.S.) 103 (1955), 759-762 (Russian)

1 - F/W

The differential equation (1)  $d^2w/dz^2 - Q(z)w = 0$ ,  $z$  complex, is transformed into the analogous equation  $d^2w_1/dz_1^2 - Q_1(z_1)w_1 = 0$  by  $z_1 = f_1(z)$ ,  $Q_1(\xi) = Q^1(\xi)$ ,  $w_1 = Q^1 w$ , where  $Q_1 = 1 - (5Q'^2 - 4QQ'')(16Q^3)^{-1}$ . By indefinite repetition of this transformation we obtain the equations  $d^2w_{n+1}/dz_{n+1}^2 - Q_{n+1}(z_{n+1})w_{n+1} = 0$ , where  $w_{n+1} = F_n^{-1} w$ ,  $z_{n+1} = f_{n+1}(z)$ ,  $F_n = QQ_1 \cdots Q_n$ . If  $F_n \rightarrow F$  uniformly in a region  $R$ , then equation (1) has solutions of the form  $w_i(z) = A_i F^{-1} \cdot \exp(-1)^{i/2} F^i d\xi$  ( $i=1, 2$ ), where  $A_1, A_2$  are constant. Besides the proof of this statement the paper contains a brief discussion of these solutions at  $z=\infty$ . L. Cesari.

APW 2/22

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/2 PG - 390  
 AUTHOR KOSTOMAROV D. P.  
 TITLE Normal and subnormal series as formal solutions of systems of linear differential equations.  
 PERIODICAL Doklady Akad. Nauk 108, 1011-1013 (1956)  
 reviewed 11/1956

In order to investigate the behavior of the solutions of linear differential equations in the neighborhood of irregular-singular points, the author uses the normal and subnormal series which formally satisfy the equation (introduced by Poincaré, Acta Math. 8, 295 (1886)). The author proves that every system

$$\frac{dw_1}{dz} = \sum_{j=1}^n a_{1j}(z)w_j, \quad a_{1j}(z) = \sum_{m=0}^{\infty} a_{1j}^{(m)} z^{\frac{s-m}{q}}, \quad s, q - \text{integral},$$

possesses a fundamental system of formal solutions. The initial point is a formal consideration of the expressions

$$\varphi(z) = \sum_{m=0}^{\infty} \varphi^{(m)} z^{\frac{s-m}{q}}, \quad \varphi^{(m)} - \text{constant}; \quad s, q - \text{integral},$$

from which no convergence is demanded. Algebraic operations are defined such

KOSTOMAROV D.P.

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/2 PG - 677  
 AUTHOR KOSTOMAROV D.P.  
 TITLE On the asymptotic behavior of the solutions of systems of linear differential equations of first order in the neighborhood of an irregular singular point.  
 PERIODICAL Doklady Akad.Nauk 110, 918-921 (1956)  
 reviewed 4/1957

Let the system

$$(1) \quad w'_i = \sum_{j=1}^n a_{ij}(z) w_j \quad i=1,2,\dots,n$$

have analytic coefficients which in the neighborhood of the infinitely far point have the form

$$a_{ij}(z) = \sum_{m=0}^{\infty} a_{ij}^{(m)} z^{k-m},$$

where the  $a_{ij}^{(m)}$  are constants and  $k$  is an integer. In an earlier paper (Doklady Akad.Nauk 108, 6, (1956)) the author has asserted that (1) possesses a fundamental system of formal solutions in the form of certain series

Doklady Akad.Nauk 110, 918-921 (1956)

CARD 2/2

PG - 677

$$w_{ij}(z) = e^{q_j(z)} z^{\xi_j} \sum_{\nu=0}^{M_j} \varphi_{ij}^{[\nu]}(z) \frac{(\ln z)^\nu}{\nu!}.$$

Now the author shows that to every ray  $\gamma$  there correspond  $n$  linearly independent solutions  $\|w_{ij}(z)\|$ , where on the ray there exists the asymptotic equation  $w_{ij}(z) \asymp W_{ij}(z)$ . Besides it is investigated in which domains of angles, which contain this ray, this asymptotic equation remains true. The proofs of the theorems <sup>are</sup> contained in the author's thesis (MGU, 1956) and base on the reduction of (1) to a system of integral equations.

$$\gamma \arg z = \varphi_0$$

INSTITUTION: Lomonossov-University, Moscow.

KOSTOMAROV, D.P.

AUTHOR:

Kostomarov, D.P.

TITLE:

On the Boundary Value Problems for Eigenvalues and Eigenfunctions of Ordinary Differential Equations Containing a Small Parameter in the Highest Derivative Term. (O krayevykh zadachakh na sobstvennyye znacheniya isobstvennyye funktsii dlya obyknovennykh differentsial'nykh uravneniy, soderzhashchikh malyy parametr pri starshey proi-zvodnoy)

20-2-8/62

PERIODICAL:

Doklady Akad.Nauk SSSR, 1957, Vol. 115, Nr 2, pp. 230 -233 (USSR)

ABSTRACT:

In a certain section  $[a, b]$  two linear differential operators with even orders be assumed:  $L[u] = (-1)^n \sum_{i=0}^{2n} p_i(x) u^{(i)}(x)$ ;  $l[u] = (-1)^m \sum_{i=0}^{2m} q_i(x) u^{(i)}(x)$ . ( $m > 0, n-m = k > 0$ ).

The author examines here the following boundary value problems:

$$I \begin{cases} L[u] + l[u] = \lambda \varphi(x) u \\ u^{(s)}(a) - u^{(s)}(b) = 0 \quad (0 \leq s \leq n-1) \end{cases}$$

$$II \begin{cases} l[v] = \lambda \varphi(x) v \\ v^{(s)}(a) - v^{(s)}(b) = 0 \quad (0 \leq s \leq m-1) \end{cases}$$

The eigenvalues and the standardized eigenfunctions are here designated as  $\lambda_j(\mu)$ ,  $u_j(x, \mu)$  resp.  $\lambda_j, v_j(x)$ . The parameter  $\mu$  is here assumed as small and positive. Then the following relations are valid under certain limitations:  $\lambda_j(\mu) = \lambda_j + O(\mu^{1/2k})$ ,  $u_j(x, \mu) =$

Card 1/2



*Kostomarov, D. P.*

**AUTHORS:** Dnestrovskiy, Yu. N., Kostomarov, D.P. 20-3-8/46

**TITLE:** The Radiation of Charged Particles Flying Past Ideally Conductive Bodies (Izlucheniye zaryazhennykh chastits pri prolete vozle ideal'no provodyashchikh tel).

**PERIODICAL:** Doklady AN SSSR, 1957, Vol. 116, Nr 3, pp. 377-380 (USSR)

**ABSTRACT:** The present report investigates the general problem referred too in the title, in non-relativistic approximation. The authors investigate the radiation of a punctiformly charged particle with the mass  $m$  and the charge  $e$  in flying past the ideally conductive surface  $S$ . The surface  $S$  is assumed to be axially symmetric and to have the equations  $r = h_1(s)$ ,  $z = h_2(s)$ ; here  $s$  is the length of the arc  $(-\infty < s < +\infty)$  and it is assumed that  $r(s) \neq 0$ ,  $\lim_{s \rightarrow \pm\infty} r(s) \neq 0$ .

The charge is assumed to move on the axis of the system from negative to positive values of  $z$ . This problem is very complicated, if carefully treated. The present information is limited to the investigation of non-relativistic approximation, the problem can subsequently be divided into

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The Radiation of Charged Particles Flying Past Ideally  
Conductive Bodies.

20-3-8/46

two problems:

- I) The equation of motion of the charge should be integrated without taking account of the retardation and the values of charges and currents induced in the screen should be determined.
- II) The radiation of the system of the currents which were determined by solving problem I, should be computed. First the equations for problem I are given. The solution of these equations by means of nondimensional coordinates is followed here step by step. The terms obtained in this way for the output  $w$  and for the total radiation  $E$  are indicated. Subsequently two subcases are discussed which correspond to various limiting cases. The analysis carried out permits the following conclusions:
  - 1) The total radiation grows with an increase of the initial velocity like  $v_0^3$
  - 2) The spectrum essentially consists of waves which are much longer than a certain characteristic dimension of the system. But with an increase of  $v_0$  the limit of the radiated spectrum moves in direction to shorter waves.

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Conductive Bodies.

20-3-8/46

- 3) The lower limit of the applicability of approximation of the assumed currents is determined by an inequation, which is given here. Finally the authors investigate the case in which the system is not excited (activated) by individual punctiform charges, but by a modulated electron ray moving at constant velocity  $v_0$ . In this case the radiation of the system is monochromatic and the frequency of this radiation is equal to the frequency  $\omega$  of the excitation. Finally the authors computed the radiation at the flight of a bundle of particles from an open half space into a round wave guide. In this case the radiation resistance depends largely on the initial velocity, and frequency, as well as on the radius of the channel. There are 2 figures, and 5 references, 5 of which are Slavic.

ASSOCIATION: Moscow State University imeni M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova).

Card 3/4

AUTHOR: Kontomarov, D.P.

SOV/55-58-1-3/33

TITLE: On the Exponential Order of Increase of the Solutions of Linear Systems of Differential Equations (Ob eksponentsial'nom poryadke rosta resheniy sistem lineynykh differentsial'nykh uravneniy)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya fiziko-matematicheskikh i yostestvennykh nauk, 1958, Nr 1, pp 33-38 (USSR)

ABSTRACT: The exponential order of increase of the solutions of

$$\frac{dw_1}{dz} = \sum_{j=1}^n a_{1j}(z)w_j \text{ is characterized by } r = \sup_{-\infty < \varphi < \infty} r(\varphi) =$$

$$\sup \left\{ \max \left[ \lim_{g \rightarrow \infty} \frac{\ln \left| \ln \sum |w_{1j}(\xi, e^{i\varphi})| \right|}{\ln g}, 0 \right] \right\}, \text{ where } w_{1j} \text{ are elements of the fundamental matrix. Let } \alpha_{1j} =$$

$$\sup \lim_{g \rightarrow \infty} \frac{\ln |a_{1j}(\xi e^{i\varphi})|}{\ln g}, \quad \alpha = \max \alpha_{1j}. \text{ Then } 0 \leq r \leq \max(0, 1 + \alpha).$$

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Let  $a_{1j}(z) = z^{\alpha} [a_{1j}^{(0)} + \xi_{1j}(z)]$ , where the  $\xi_{1j}$  are holomorphic in

AUTHOR: Kostomarov, D.P. (Moscow)

39-44-2-1/10

TITLE: Formal Systems of Linear Differential Equations and Their Solutions in Form of Normal- and Subnormal Series (Formal'-nyye sistemy lineynykh differentsial'nykh uravneniy i ikh resheniya v vide normal'nykh i podnormal'nykh ryadov)

PERIODICAL: Matematicheskiy Sbornik, 1958, Vol 44, Nr 2, pp 137-156 (USSR)

ABSTRACT: The author investigates the asymptotic series expansions introduced by Poincaré in the neighborhood of a singular point of the system

$$w_i' = \sum_{j=1}^n a_{ij}(z) w_j \quad (i = 1, 2, \dots, n)$$

where  $a_{ij}(z) = \sum_{m=0}^{\infty} a_{ij}^{(m)} z^{\frac{s-m}{q}}$  ( $a_{ij}^{(m)}$  constants,  $s$  and  $q$  inte-

ger,  $q > 0$ ). The existence of fundamental systems of normal and subnormal solutions is proved, these are calculated and their properties investigated. The author's results are partially anticipated by an investigation of K.Ya.Latysheva

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Formal Systems of Linear Differential Equations and  
Their Solutions in Form of Normal- and Subnormal Series

39-44-2-1/10

[Ref 2] . Furthermore all the results were already announced  
by the author [Ref 1] . There are 4 references, 3 of which  
are Soviet, and 1 German.

SUBMITTED: August 13, 1956

AVAILABLE: Library of Congress

1. Linear differential equations - Analysis

Card 2/2

AUTHOR: ~~Kostomarov, D. P.~~ (Moscow)

39-45-1-2/6

TITLE: On the Asymptotic Behavior of the Solutions of Certain Linear Differential Equations of Second Order With a Large Parameter (Ob asimptoticheskom povedenii resheniy nekotorykh lineynykh differentsial'nykh uravneniy vtorogo poryadka, soderzhashchikh bol'shoy parametr)

PERIODICAL: Matematicheskiy Sbornik, 1958, Vol 45, Nr 1, pp 17-30 (USSR)

ABSTRACT: Let the Sturm - Liouville equation

$$(1) \quad \frac{d}{dx} \left( p(x) \frac{dy}{dx} \right) - q(x)y + \mu^2 \varphi(x)y = 0$$

be given and let be  $p(x) = (x-a)^\alpha p_1(x)$ ;  $\varphi(x) = (x-a)^{\alpha-1} \varphi_1(x)$ ;  $q(x) = (x-a)^{\alpha-2} [q_0 + (x-a)q_1(x)]$ , where  $q_1(x)$  is continuous,  $p_1(x)$  and  $\varphi_1(x)$  are two times continuously differentiable and  $p_1(x) \neq 0$ ,  $a \leq x \leq b$ ,  $\varphi_1(x) \neq 0$ ,  $a < x < b$ . Let  $\mu$  be a large parameter. The author gives asymptotic formulas for two linearly independent solutions  $y_1(x)$  and  $y_2(x)$ , e.g.

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On the Asymptotic Behavior of the Solutions of Certain Linear Differential Equations of Second Order With a Large Parameter 39-45-1-2/6

$$y_1(x) = \frac{C_1}{\sqrt{p(x) q(x)}} \left\{ \left( \mu \int_a^x \sqrt{\frac{q(\tau)}{p(\tau)}} d\tau \right)^{1/2} u_{1(n)} \left( \mu \int_a^x \sqrt{\frac{q(\tau)}{p(\tau)}} d\tau \right) + \right. \\ \left. + \frac{1}{\mu^{n+1}} G_{1(n)}(x, \mu) \right\}$$

where  $u_{1(n)}(t)$  and  $G_{1(n)}(x, \mu)$  are rather complicated functions, the representation of which is given with the aid of integrals and Bessel functions. These results are used for obtaining asymptotic formulas for the eigenfunctions of a boundary value problem set up for (1). Furthermore asymptotic expansions for adjoint spherical functions and Jacobian polynomials are given, e.g.

$$P_n(\cos \theta) = (-1)^n \sqrt{\frac{\pi - \theta}{\sin \theta}} J_0 \left[ \left( n + \frac{1}{2} \right) (\pi - \theta) \right] + \frac{1}{1 + \sqrt{n(\pi - \theta)}} O \left( \frac{1}{n} \right),$$

$$0 < \theta_0 \leq \theta \leq \pi.$$

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On the Asymptotic Behavior of the Solutions of Certain      39-45-1-2/6  
Linear Differential Equations of Second Order With a Large Parameter

There are 5 references, 2 of which are Soviet, 1 English,  
1 American, and 1 German.

SUBMITTED: May 15, 1956

AVAILABLE: Library of Congress

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KOSTOMAROV, D.P.

16(1)  
Vsesoyuznyy matematicheskiy s'ezd. 3rd, Moscow, 1956  
Trudy. T. 4; Kratkoye soobrazheniye sektsionnykh dokladov. Doklady  
Inostrannykh uchenykh (Transactions of the 3rd All-Union Mathema-  
tical Conference in Moscow, vol. 4, Summary of Sectional Reports,  
Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959.  
247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskii Institut.  
Tech. Ed.: O.M. Shevchenko; Editorial Board: A.A. Abramov, V.G.  
Boltyanskii, A.M. Gikl'fel'd, B.V. Medvedev, A.D. Myshkis, S.M.  
Rybni'skiy (resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, E.A.  
Rybakov, P. L. Ul'yanov, Ya. Ippolitskiy, N.G. Chetaev, G. Ye.  
Shilov, and A.I. Zhuravov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGES: The book is Volume IV of the Transactions of the Third All-  
Union Mathematical Conference, held in June and July 1956. The  
book is divided into two main parts. The first part contains sum-  
maries of the papers presented by Soviet scientists at the con-  
ference; the second part contains the text of reports submitted to the editor  
by non-Soviet scientists. In those cases when the non-Soviet sci-  
entist did not submit a paper, his paper to the editor, the title  
of the paper is cited and, if the paper was printed in a previous  
volume, reference is made to the appropriate volume. The papers,  
both Soviet and non-Soviet, cover various topics in number theory,  
algebra, differential and integral equations, functional analysis,  
functional analysis, probability theory, topology, mathematical  
physics, mechanics and physics, computational mathematics,  
mathematical logic and the foundations of mathematics, and the  
history of mathematics.

Korbanik, Yu. P. (Moscow-Bonn). Certain problems of the  
theory of infinite systems of linear integral equations and  
their applications to mathematical physics 26

Kolomoyskiy, D. P. (Moscow). On the asymptotic behavior of the  
solutions of systems of linear differential equations of the  
first order in the neighborhood of an irregular singular point 27

Korbanik, Yu. P. (Moscow). On one type of boundary value problems  
for elliptic systems of linear differential equations of the  
second order 27

Ladyzhenskaya, O. A. (Leningrad). The first boundary value  
problem for quasilinear parabolic equations and the Cauchy  
problem for quasilinear hyperbolic equations in the large 29

Lentini, E. M. (Moscow). On the expansion in eigenfunctions  
of the Schrödinger equation 30  
Card 7/21

SOV/109-59-4-2-19/27

AUTHORS: Dnestrovskiy, Yu.N. and Kostomarov, D.P.  
 TITLE: Radiation of Charged Particles During Their Transit  
 Near Ideally Conducting Bodies (Izlucheniye pri  
 prolete zaryazhennykh chastits vozle ideal'no  
 provodyashchikh tel)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 2,  
 pp 303-312 (USSR)

ABSTRACT: A point-type charged particle, having a mass  $m$  and  
 a charge  $e$ , passes in the vicinity of an ideally  
 conducting surface  $S$ . It is assumed that the surface  $S$   
 has an axial symmetry and that it can be represented by  
 the first equations on p 304; the particle moves along  
 the axis  $z$  (see Fig 1). Mathematically, the problem is  
 expressed by

$$\Delta u = 0 \text{ in the region } T; u|_S = -u_0|_S \quad (1)$$

$$m\ddot{z}_0 = -e \frac{du}{dz}(0, z, z_0)|_{z=z_0}; \lim_{t \rightarrow \infty} \dot{z}_0(t) = v_0 \quad (2)$$

Card 1/4 where  $T$  is a region bounded by the surface  $S$ ,  $u_0$  is the

SOV/109-59-4-2-19/27

Radiation of Charged Particles During Their Transit Near Ideally  
 Conducting Bodies

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220013

Coulomb potential of the charge  $e$  when situated at a  
 point  $M_0$ . Integration of Eq (2) leads to Eq (3) where  
 $f$  is expressed by Eq (3a), while  $g$  is given by the  
 regular portion of the Green function  $G$  (see p 304).  
 The charge densities  $\sigma$  and the currents  $j$  induced in the  
 screen  $S$  are given by Eq (4) and (5) respectively. The  
 radiated power is expressed by Eq (8), the radiation  
 energy by Eq (9) and its power spectrum by Eq (10),  
 where various parameters are defined by the equations  
 on p 305. In the case of small initial electron  
 velocities, Eq (9) can be written as Eq (12), while for  
 high initial electron velocities, the total radiated  
 energy can be expressed by Eq (13) or Eq (14). If the  
 above radiation system is excited not by a single charged  
 particle, but by a modulated electron beam having a  
 constant velocity  $v_0$ , the radiated power can be  
 expressed by Eq (20), where  $I_0$  denotes the beam current  
 and  $V_0$  is the accelerating potential. The radiation  
 resistance of the system and its power efficiency are  
 given by Eq (21) and (22) respectively. The above

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SOV/109-59-4-2-19/27

Radiation of Charged Particles During Their Transit Near Ideally  
Conducting Bodies

analytical expressions can be used to investigate the radiation of the charges which enter a circular waveguide fitted with an infinitely large flange (see Fig 2). In this case the function  $\bar{V}$  is expressed by Eq (23). The energy radiated by a single particle entering a waveguide is given by Eq (24), while the radiation resistance of the system is expressed by Eq (25). The dependence of the radiation resistance on the parameters  $a/\lambda$  and  $\beta$  is shown in Fig 4 and 5;  $a$  denotes the radius of the waveguide. The derivation of some of the formulae of the article is given in the Appendix on pp 311-312. The authors express their gratitude to R.V.Khokhlov and V.B.Braginskiy for suggesting the problem and discussing the results. The paper was read at the Electronics

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APPROVED FOR RELEASE: 06/14/2000

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CIA-RDP86-00513R000825220013-

Radiation of Charged Particles During Their Transit Near Ideally  
Conducting Bodies

Section of the "Radio Day Conference" in May 1957.  
There are 5 figures, 1 table and 6 Soviet references.

ASSOCIATION: Fizicheskii Fakul'tet Moskovskogo Gosudarstvennogo  
Universiteta im. M.V.Lomonosova (Physics Department of  
the Moscow State University imeni M.V.Lomonosov)

SUBMITTED: 4th June 1957

Card 4/4

9(3)

AUTHORS:

Dnestrovskiy, Yu. N., Kostomarov, D. P.

SOV/20-124-4-17/67

TITLE:

The Radiation of a Modulated Beam of Charged Particles When Passing Through a Circular Opening in a Plane Screen  
(Izlucheniye modulirovannogo puchka zaryazhennykh chastits pri prolete cherez krugloye otverstiye v ploskom ekrane)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 4, pp 792-793 (USSR)

ABSTRACT:

The present paper discusses the calculation of the radiation which occurs during the passing of the modulated electron beam through a circular opening in an infinitely thin and ideally conductive screen. The calculation was carried out for the velocity range of from  $\beta = 0.1$  to  $\beta = 0.99$  ( $\beta = v/c$ ) by the numerical solution of the corresponding integral equation by means of the electronic computer "Strela". For this purpose a cylindrical system of coordinates is introduced. The total electromagnetic field is represented in the form  $\vec{E}(t) = \vec{E}(0) + \vec{E}$ ,  $\vec{H}(t) = \vec{H}(0) + \vec{H}$ ; here  $\vec{E}(0)$  and  $\vec{H}(0)$  denote the field induced by the beam in the infinite space,  $\vec{E}$  and  $\vec{H}$  denote the field caused by the existence of the screen. The

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SOV/20-124-4-17/67

The Radiation of a Modulated Beam of Charged Particles When Passing Through a Circular Opening in a Plane Screen

problem is reduced to determination of the additional field  $E$  and  $H$ , which satisfies a homogeneous system of Maxwell equations and the corresponding mixed boundary conditions in the plane  $z = 0$ . From the vectorial analogue of Green's formulas for the aforementioned field a relation for  $H(M)$  is obtained, and herefrom one further obtains a Fredholm integral equation of the first kind. The unique solution of this integral equation is also the solution of the problem upon which the present paper is based. The second part of this paper gives the computation steps. The expression found for  $H_p$  is written down. Here  $\varphi$  denotes one of the polar coordinates. The dependence of the radiation resistance on the distribution of the current density in the bundle is shown by 2 diagrams. Finally, two limiting cases are investigated, and asymptotic formulas for them are set up. There are 2 figures and 6 references, 5 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

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SOV/20-124-4-17/67

The Radiation of a Modulated Beam of Charged Particles When Passing Through a Circular Opening in a Plane Screen

PRESENTED: October 14, 1958, by B. A. Vvedenskiy, Academician

SUBMITTED: September 26, 1958

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24 (APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000825220013-

AUTHORS: Dnestrovskiy, Yu. N.,  
Kostomarov, D. P.

SOV/20-124-5-18/62

TITLE: The Radiation of Ultrarelativistic Charges  
During Passage Through a Circular Opening in a Screen  
(Izlucheniye ul'trarelyativistskikh zaryadov pri  
prolete cherez krugloye otverstiye v ekrane)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 5,  
pp 1026-1029 (USSR)

ABSTRACT: In one of the authors' earlier papers the radiation of a modulated beam of charged particles during passage through a circular opening in an ideally conductive screen was calculated. By using the asymptotic formulas derived for ultrarelativistic velocities, the authors calculate the radiation occurring during passage of an arbitrary axially-symmetrically distributed charge through a circular opening. The charge is assumed to move as a whole with constant ultrarelativistic velocity. A cylindrical system of coordinates is introduced, the z-axis of which passes through the center of the opening vertical to the plane of the screen. A certain charge with the constant ultrarelativistic velocity  $v(\beta = v/c \sim 1)$  is

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The Radiation of Ultrarelativistic Charges  
During Passage Through a Circular Opening in a Screen

SOV/20-124-5-18/62

assumed to move in the positive direction of the z-axis. In the system of coordinates moving simultaneously the charge with the density  $\rho = \rho(r, z)$  is assumed to be distributed. For the electromagnetic field  $\vec{E}(t) = \vec{E}(0) + \vec{E}$ ,  $\vec{H}(t) = \vec{H}(0) + \vec{H}$  is assumed. Here  $\vec{E}(0)$  and  $\vec{H}(0)$  denote the total electric and magnetic field strength respectively;  $\vec{E}(0)$  and  $\vec{H}(0)$  - the field of the simultaneously moving charge in free space;  $\vec{E}$  and  $\vec{H}$  - the additional field generated by the existence of the screen. The field  $\vec{E}(0)$ ,  $\vec{H}(0)$  makes no contribution to the radiation, and the problem is reduced to calculation of the additional field. The current density  $j_z$ , and the electric and magnetic field strengths are expanded in Fourier integrals. For the Fourier component of the additional magnetic field in the wave zone a formula is derived. Next, the radiated energy is calculated. The maximum of the spectral density of the radiation is within the range of low frequencies.

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The Radiation of Ultrarelativistic Charges  
During Passage Through a Circular Opening in a Screen

SOV/20-124-5-18/62

With increasing velocity of the charge the share of short waves in the radiated energy increases. The total energy of radiation is proportional to the total energy of the charge  $T = mc^2$ , and the ratio depends only to a small extent on velocity. For a single electron this ratio is very low, but in the case of condensations it increases in proportion to the number of electrons in this condensation. The results obtained by the present paper are suited for the purpose of estimating the energy radiated by the particles in accelerators when flying past geometric inhomogeneities in the accelerating interspaces. The authors also mention a short numerical example. The effect discussed in the present paper is quite remarkable and should be taken into account when designing accelerators for ultrarelativistic particles. There are 1 figure and 1 Soviet reference.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: October 14, 1958, by BA. Tvedenskiy, Academician  
Card 3/4

83263

S/109/60/005/009/009/026  
E140/E455

9.4210

AUTHORS: Dnestrovskiy, Yu.N. and Kostomarov, D.P.  
TITLE: Electromagnetic Radiation Due to a Beam of Charged  
Particles Passing a Waveguide with Infinite Flange  
PERIODICAL: Radiotekhnika i elektronika, <sup>25</sup>1960, Vol.5, No.9,  
pp.1431-1441

TEXT: The article concerns radiation arising with passage of a modulated beam of charged particles past a plane waveguide with infinite flange. This problem arises, for example, in the study of radiation of higher electromagnetic field harmonics in magnetrons. The problem is considered in the two-dimensional case. The waveguide and flange are assumed ideally conducting; the beam is directed perpendicular to the plane of symmetry of the waveguide, and the effect of radiation and charged interaction on the motion of the beam is neglected, the charge velocity being taken constant (the assigned-current approximation). The electromagnetic field in the waveguide is written in the form of a superposition of normal waves with undefined coefficients. Using the vector analogy to Green's formula, an infinite system of algebraic equations in these coefficients is constructed. The system was  
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S/109/60/005/009/009/026  
E140/E455

Electromagnetic Radiation Due to a Beam of Charged Particles  
Passing a Waveguide with Infinite Flange

solved numerically on the electronic computer "Strela". The radiation in the waveguide (waveguide excitation) and the radiation into the open half-space are considered. Graphs are given for various cases. Acknowledgment is made to R.V.Khokhlov for his assistance. There are 6 figures, 1 table and 8 Soviet references.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova (Physics Faculty, Moscow State University im. M.V.Lomonosov)

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AUTHORS: Dnestrovskiy, Yu. N., Kostomarov, D. P.

TITLE: Electromagnetic Waves in a Semispace Filled With Plasma

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TEXT: The present paper describes a theoretical study of the penetration of electromagnetic waves into a plasma-filled semispace. In addition to Maxwell equations, a linearized equation of electron motion is used to describe this process. The requirement of mirror reflection of the electrons serves as a boundary condition at the boundary of the plasma. This problem has been studied repeatedly (Refs. 1-6). Methods and results of previous studies (L. D. Landau and V. P. Silin) are discussed by way of introduction, and the contribution made by V. D. Shafranov is dealt with in greater detail. The problem appears to be solved consistently only for the special case of the plasma being placed in a magnetic field  $H_0$ , which is perpendicular to the plasma surface and parallel to the direction of propagation of the electromagnetic wave. The reverse case is

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